

**Amendments to the Specification**

- Please replace the paragraph on page 2, lines 28-31, with the following amended paragraph:

Hence, there is and will continue to be a demand for downhole chemical measurements. However, no downhole chemical measurements actually performed in a an oil and gas producing well have been reported so far.

- Please replace the paragraph spanning page 2, line 33 through page 3, line 9 with the following amended paragraph:

To meet demand for chemical measurements of increasing accuracy, it may appear obvious to adapt chemical analysis tools known from chemical laboratory practice to the hostile environment of a subterranean borehole. Such known analysis tools include for example the various types of chromatography, electrochemical and spectral analysis. Particularly, the potentiometric method has been widely used for the measurements of water composition (pH, Eh, H<sub>2</sub>S, CO<sub>2</sub>, Na<sup>+</sup>, Cl<sup>-</sup> etc...) both in the laboratory and in the field of ground water quality control. However, so far the environmental conditions within a subterranean wellbore rendered attempts to perform such measurements under real hydrocarbon wellbore ~~condition~~ condition purely theoretical.

- Please replace the paragraph on page 5, lines 29-30 with the following amended paragraph:

FIG. 11 shows a formation testing apparatus held on a wireline within a wellbore, in accordance with the ~~invention~~ invention;